



The CITY of
EDINA

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Edina City Center Council Chamber AV Systems Project Edina, Minnesota Project Manual

Book 1 of 1

Wednesday, July 15, 2015



Project Manual

I. INSTRUCTIONS TO BIDDERS

II. SUMMARY OF WORK

III. SPECIFICATIONS

GENERAL REQUIREMENTS AND SPECIFICATIONS FOR:

CITY OF EDINA COUNCIL CHAMBER

AV SYSTEMS PROJECT

4801 West 50th Street

EDINA, MN 55424

Bid Time: 10:00 A.M.

Bid Date: July 28, 2015

Bid Place: City of Edina
Council Chamber
4801 West 50th Street
Edina, MN 55424

PROJECT TITLE AND LOCATION:

City of Edina Council Chamber

AV Systems Project

4801 West 50th Street

Edina, MN 55424

OWNER:

City of Edina

AUDIO VISUAL CONSULTANTS:

TouchPoint Logic

1276 Park Road, Suite B

Chanhassen, MN 55317

952-401-9354

DATE:

July 15, 2015

I. INSTRUCTIONS TO BIDDERS

A. **Definitions.** The following definitions shall apply to this Project Manual:

1. The term “Bidder” shall refer to anyone submitting a bid in response to this Project Manual.
2. The term “Owner”: City of Edina
3. The term “Consultant”: TouchPoint Logic
4. The term “Audio-Visual Contractor”: The successful bidder responsible for the complete installation of the audio-visual systems specified in this Project Manual.
5. The term “Project” shall refer to the audio-visual systems outlined in this Project Manual.
6. The term “Work” shall refer to the work required by this Project Manual to complete the Project.
7. The term “Contract Documents” shall refer to the City’s Standard Construction Contract and this Project Manual with all attachments.
8. The term “Project Manual” shall refer to this manual which consists of the Advertisement for Bids; Instructions to Bidders; Summary of Work; Specifications and all attachments.

B. **Project.**

1. This Project includes: Furnish and installation of audio visual equipment for the Council Chambers and Control Room.
2. The Owner requires Substantial Completion of the project on or before Friday, October 2, 2015 with work beginning no earlier than Monday, September 21, 2015.
3. There will be an individual, mandatory pre-bid walk through of the project site starting on Wednesday, July 15, 2015. Call TouchPoint Logic at 952-401-9354 to setup an appointment.

C. **Bids.**

1. The City of Edina will receive single prime sealed bids for the City of Edina Council Chamber – AV Systems Project until 10:00 am, Tuesday, July 28 at the Edina Council Chamber, 4801 West 50th Street, Edina, MN 55424 at which time and place all bids will be publicly opened and bidding vendors acknowledged.
2. Bidding documents, including the Proposal Form, Drawings and Specifications, will be on file at the Offices of the Consultant, TouchPoint Logic, 1276 Park Road, Suite B, Chanhassen, MN 55317.
3. Bids shall be submitted on the attached Bid Form and shall include all information required by this Project Manual. Provide three (3) copies of the bid. No oral, telegraphic or telephonic proposals or modifications will be considered. Submit with each bid, a certified check or acceptable bidder’s bond payable to the City of Edina in an amount

equal to five percent (5%) of the total bid. The successful bidder will be required to furnish satisfactory Labor and Material Payment Bond and Performance Bond.

4. Bids may not be withdrawn within thirty (30) days after the scheduled time of opening bids, without the consent of the Owner. The Owner reserves the right to accept any bid or to reject any or all bids, or parts of such bids and waive informalities or irregularities in bidding.

D. Conditions and Stipulation.

1. Bids shall conform to the Project Manual and an award to you will bind you to comply fully with all terms of the Project Manual.
2. The Owner reserves the right to accept or reject any or all proposals and to waive formalities and select the bidder that best meet the needs of the Owner and its employees. The Owner is not obligated to award a contract. The Owner is not obligated to award the contract based on cost alone. The Owner will choose the bid that best fits its needs.
3. During the evaluation process, the Owner reserves the right, where it may serve the Owner of Edina's best interest, to request additional information or clarifications from vendors, or to allow corrections of errors or omissions.
4. The successful bidder will be required to enter into a written agreement with the Owner in the form and substance of the City's Standard Construction Contract, included in this Project Manual. The Owner reserves the right to negotiate the specific terms and conditions of the Contract.
5. The successful Bidder will be required to submit payment and performance bond in the form included in this Project Manual with the Contract.
6. The Owner reserves the right to retain all bids submitted and use any idea in a bid regardless of whether that bid is selected. All data, documents and other information provided to the Owner by the bidder will become property of the Owner and subject to its disposition. The Owner is subject to the Minnesota Government Data Practices Act, Minnesota Statute Chapter 13, and all information submitted shall be subject to the requirements of the Act.
7. All costs associated with the preparation of the firm's bid will be the responsibility of the firm submitting the proposal.
8. Questions related to the specific project requirements shall be submitted in writing by 10 am, July 23, 2015 to TouchPoint Logic.
9. Written responses to all questions received will be furnished to all bidders via addendum issued on 5 pm, July 24, 2015. No oral questions will be entertained prior to or after the deadline for written questions specified above. Only written addendum to the Project manual bind the Owner. The Owner shall not be bound by any oral representations.

BID FORM

BID PROPOSAL FOR: CITY OF EDINA COUNCIL CHAMBERS

AV SYSTEMS PROJECT

4801 West 50th Street

EDINA, MN 55424

BID TO: CITY OF EDINA

4801 West 50th Street

EDINA, MN 55424

BID FROM: _____

We have examined the Contract Documents for the proposed City of Edina Council Chamber – AV Systems Project as prepared by TouchPoint Logic, Chanhassen, Minnesota and the conditions affecting the work.

In accordance therewith the undersigned proposed to furnish all labor and materials for Construction as set forth in the Contract Documents.

1. Accompanying this proposal is a Bid Security for all work, required to be furnished by Contract Documents, the same being subject to forfeiture in the event of default by the undersigned.
2. I agree to complete the Project, provided a contract is executed within thirty (30) calendar days, by Friday, October 2, 2015.
3. I understand the Owner reserves the right to reject any or all bids, and it is agreed that this bid may not be withdrawn for a period of thirty (30) days from the opening thereof.
4. I agree that my bid will include a copy of the Equipment list, with all the unit prices indicated, for *Architecturally Integrated Audio-Video Equipment – Council Chambers and Control Room*.

Base Bid – Council Chambers and Control Room AV Systems

The Bidder agrees to perform all work for the Base Bid Sum of:

_____ Dollars \$ _____

DATE: _____

TELEPHONE NUMBER: () _____ - _____

FIRM NAME: _____

FAX NUMBER: () _____ - _____

ADDRESS: _____

BY: _____

TITLE: _____

STATEMENT OF COMPLIANCE WITH WORKERS COMPENSATION ACT

Page One of Two

The undersigned hereby states that (he) (she) (it) is in full compliance with Minnesota Worker's Compensation Act, M.S.A. 176.01 et. seq., and gives this Statement as evidence thereof as per Minnesota Statutes, Section 176.182.

The undersigned hereby states that (he) (she) (it) carries workers compensation insurance in the amount of \$ _____ in compliance with Minnesota Statutes, Section 176.181(2).

The undersigned hereby states that if (he) (she) (it) is exempt from the Minnesota Worker's Compensation Act for the following reason(s):

That the only persons engaged in the businesses are:

_____ The partners, their spouses, parents or children, regardless of age; or

_____ The executive officer, who owns more than 25% of the stock, his or her spouse, parents or children, regardless of age, of a closely held corporation with less than 22,880 hours of payroll per year; or

_____ Persons whose employment is casual, and not in the usual course of the trade, business, profession or occupation of the undersigned; or

_____ Persons employed by the corporation where those persons are related by blood or marriage, within the third degree of kindred according to the rules of civil law; to all of the officers of the corporation and the corporation has filed a written election with the Commissioner of Labor and Industry to have those persons excluded from the Minnesota Worker's Compensation Act; or

_____ Other: (Cite Legal Authority)

The undersigned shall indemnify, defend and hold the City of Edina harmless from any and all damages and claims that may arise by reason of any injury to the undersigned, (his) (her) (its) agents or employees, in the performance of the contract with the City; and in case any action is brought therefore against the City of Edina, the undersigned shall assume full responsibility for the defense thereof, and upon (his) (her) (its) failure to do so on proper notice, the City of Edina reserves the right to defend such action and to charge all costs thereof to the undersigned.

In furtherance of this statement of compliance with Minnesota Statutes, Section 176.182, the undersigned of the attached certificate of workers' compensation insurance that provides the name of the insurance company, the policy number and dates of coverage or the attached copy of the permit to self-insure.

STATEMENT OF COMPLIANCE WITH WORKERS COMPENSATION ACT

Page Two of Two

Dated this _____ day of _____, 20__.

Contracting Firm Name

Signature

Title

Address

City State Zip

Telephone Number

CORPORATE ACKNOWLEDGMENT

Dated this ____ day of _____, 20__.

Subscribed and sworn to before me this ____ day of _____, 20__.

CITY OF EDINA, MINNESOTA

PAYMENT BOND

BOND NO. _____

PENAL SUM _____

KNOW ALL MEN BY THESE PRESENTS that we, _____, (“Principal, and _____, a corporation organized under the laws of the State of _____ and duly authorized to transact business in the State of Minnesota, (“Surety”), are held and firmly bound unto CITY OF EDINA, a public corporation, (“Obligee”), in the penal sum of _____

DOLLARS (\$ _____), for the payment whereof well and truly to be made, the principal and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal and the Obligee have entered into an Agreement, dated the _____ day of _____, 20____, (“Agreement”) which agreement is by reference made a part hereof, as if fully set forth.

NOW, THEREFORE, the condition of this obligation is such that if the Principal, its heirs, executors, administrators, successors, or assigns, or a subcontractor, shall fail to pay any person or persons furnishing labor and/or materials, as defined in Minnesota Statute Section 574.26, pursuant to the Agreement, then Surety will pay for the same, in or to an amount not exceeding the penal sum of this bond, set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney’s fees as shall be fixed by the court.

This bond shall inure to the benefit of any persons furnishing labor and/or materials, as defined in Minnesota Statute Section 574.26, pursuant to the Agreement, so as to give a right of action to such person or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement hereinabove described or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement hereinabove described, nor by any rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason on any breach of the Agreement, but the sole conditions of recovery shall be that claimant is a person furnishing labor and/or materials, as defined in Minnesota Statute Section 574.26, pursuant to the Agreement, and has not been paid the full amount of his/her or its claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

SIGNED, sealed, and dated this _____ day of _____, 20____.

By _____
Principal

By _____
Attorney-in-fact.

II. SUMMARY OF THE WORK

PART 1: GENERAL

SUMMARY

This Section includes the following:

1. Work covered by the Contract Documents.
2. Use of premises.
3. Owner's occupancy requirements.
4. Punch list Completion.
5. Work restrictions.
6. Specification formats and conventions.

PROJECT IDENTIFICATION

- | | |
|------------------------------|---|
| A. Project Name: | City of Edina Council Chamber – AV Systems Project |
| B. Owner: | City of Edina
4801 West 50 th Street
Edina, MN 55424 |
| C. Audio Visual Consultants: | TouchPoint Logic
1276 Park Road, Suite B
Chanhassen, MN 55317
952-401-9354 |

SUMMARY OF THE WORK

Briefly and without force and effect upon the Contract Documents, the Work of this single prime Contract can be summarized as follows:

- A. Work under the Contract Documents includes:
1. Base bids for Furnishing and Installation of audio and visual systems for the Council Chambers and Control Room.
 2. Keep Consultant fully informed about progress of the Work, performance of the Work and potential problems.

WORK PHASES

- A. Start process immediately upon contract award by the City Council. Substantial Completion for this project shall be on Friday, October 2, 2015.

WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Project with work performed under separate contracts.

USE OF PREMISES

- A. General: The Owner will continue operations during construction. Audio-Visual Contractor shall have limited use of premises for construction operations as indicated on drawing by the Contract Documents limits.
 - 1. Audio-Visual Contractor is to visit site and be familiar with existing conditions. Audio-Visual Contractor will be required to accept existing conditions on site prior to mobilizing.
- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Allow for Owner occupancy of Project site and use by the public.
 - 2. Driveways and Entrances: Keep driveways, loading areas and entrances serving premises clear and available to Owner, Owner's employees and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 - 3. Public Streets: Maintain clear of automobile parking, equipment or material storage unless arrangements have been made with the appropriate jurisdiction.
 - 4. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.
- C. Do not allow construction waste and debris to accumulate; remove debris as it accumulates and, unless specified otherwise, dispose of legally off-site.
- D. Conform to City's noise control regulations, including limited hours of construction operations.
- E. Use of Existing Building: Maintain existing building in a weather-tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

LAYING OUT WORK

- A. Locate all general reference points. Where dimensions or observed scope of Work differ substantially from Drawings, notify Consultant for decision.
- B. Lay out Work from the reference points furnished and be responsible for all lines, elevations, and measurements inside workspace. Exercise proper precaution to verify figures shown on Drawings before laying out Work and will be held responsible for any error resulting from the failure to exercise such precaution.
- C. Hire the services of a locator company to locate all privately owned utilities that may be disturbed by construction operations.
- D. Coordinate utility connections with municipality/utility company in which project is being constructed.

OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy portions of the site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
 - 3. All activities that affect Owner's operations shall be performed outside of regular business hours.
- B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
 - 1. Consultant will prepare a punch list for each specific portion of the Work to be occupied before Owner move in.
 - 2. Obtain a temporary Certificate of Occupancy if required from authorities having jurisdiction before Owner occupancy to install furnishings and equipment.

WORK RESTRICTIONS

- A. The Audio-Visual Contractor's access to and use of the site/facility for completion of Work shall be subject to the following:
 - 1. Should the Audio-Visual Contractor have additional Work to complete after October 2, 2015; including punch-list Work within the existing building, continuous use of facilities is required by the Owner during regular business hours. Work in those areas shall occur before or after business hours on weekdays and Saturday, and Sundays and shall be cleaned and available for use the following business day.

2. Should the Audio-Visual Contractor choose to perform work after normal business hours when the building is occupied, the Audio-Visual Contractor shall:
 - a. Maintain access, building utilities and services to allow full and free use of the facility during this time. All temporary conditions, re-routing of services, utilities and/or power are the Audio-Visual Contractor's responsibility.
 - b. Coordinate access and storage of materials and equipment with the Owner's designated building representative. To the fullest extent possible provide for normal building operation, and the safety of the building's occupants. Work in areas that occur during evenings and weekends shall be cleaned and available for use the following business day.
 - c. Coordinate schedule with the Owner's designated building representative.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify Consultant not less the seven (7) days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Consultant or Owner's permission.

CERTIFICATE OF INSURANCE

- A. The Audio-Visual Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the State of Minnesota insurance to protect the Owner from claims set forth below which may arise out of or result from the Audio-Visual Contractor's operations and completed operations under the Contract Documents and for which the Audio-Visual Contractor may be legally liable, whether such operations be by the Audio-Visual Contractor or by anyone directly or indirectly employed by the Audio-Visual Contractor.
 1. Claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the work to be performed.
 2. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Audio-Visual Contractor's employees.
 3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Audio-Visual Contractor's employees.
 4. Claims for damages insured by usual personal injury liability coverage.
 5. Claims for damages, other than to the project itself, because of injury to, or destruction of, tangible property, including loss of use resulting therefrom.
 6. Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle.
 7. Claims for bodily injury or property damage arising out of completed operations.
- B. The insurance required shall be written for not less than the limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverage, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the project until the date of final payment and termination of any coverage required to be maintained after final payment, and with respect to the Audio-Visual Contractor's completed operations coverage, until the expiration of the period specified in the Contract Documents.

- C. Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the project and upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies shall contain a provision that coverage afforded under the policies will not be canceled or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage including coverage for completed operations shall be submitted with the final application for payment and thereafter upon renewal or replacement of such coverage until the expiration of the contract. The Audio-Visual Contractor shall provide information concerning reduction of coverage on account of revised limits or claims paid under the general aggregate, or both, with reasonable promptness.

PERFORMANCE AND PAYMENT BOND

- A. The Audio-Visual Contractor shall furnish performance and payment bonds covering the faithful performance of the Contract Documents and the payments of all obligations arising thereunder. The bonds shall each be in the amount of 100% of the contract price. The bonds shall be in the form included in this Project Manual. The contract will not be signed until the Owner has received the proper bonds, which have been issued by a bonding company licensed to do business in the State of Minnesota. All bonds signed by an agent must be accompanied by a certified copy of the authority to act. Bond amounts shall not exceed the single bond limit for the Dealer's bonding company.

SALES TAX

- A. The City of Edina adheres to all applicable sales tax regulations as established by all city, state and federal authorities (7.275%).

PART 2: SUBSTITUTIONS AND PRODUCT OPTIONS

DESCRIPTION

- A. This Section defines procedures to be followed to gain acceptance of products in the Work which are not listed in the individual specification sections. A two (2) step process is required.
- B. Bidding of alternative manufacturers is encouraged, providing the alternate product meets the specifications of the suggested product.

PRODUCT OPTIONS

- A. Where products are specified by reference standards, any product established by a material testing agency to meet these standards is acceptable.
- B. Where multiple manufacturers and associated models are specified, select any one named.
- C. Where manufacturer(s) alone are specified, select any manufacturer and the product recommended in writing by the manufacturer as most suitable to the application shown on the Drawings and Specifications.
- D. Products meeting the performance standards of the suggested equipment will be accepted. Bidder understands that in the event its substitute product is determined to not meet the standards of the suggested product its bid may be considered incomplete. The bidder may agree to provide the suggested equipment at the cost of the bid product or the suggested product, whichever is less.

PRODUCT SUBSTITUTIONS

- A. Step One – Manufacturers Acceptance
 - 1. Individual specification sections may be amended by the Audio-Visual Contractor during the bid period to include additional names of manufacturers determined to be capable of providing acceptable materials.
 - 2. To propose the names of specific manufacturers, submit or arrange for suppliers to submit, written requests to Consultant.
 - 3. Provide sufficient review data. Include specified manufacturer's model numbers and proposed manufacturer's product literature, noting product numbers for proposed substitutions and where appropriate, samples and data relating to construction details. If the product is not identical to specified product, submit letter stating proposed manufacturer will custom make products to meet specified product.
 - 4. Consultant acceptance is based upon his determination that a manufacturer is capable of supplying acceptable materials. Approval is not assured or implied for a specific material or item of equipment.
 - 5. Official notification will be by addendum to the Contract Documents. However, in addition, if letters of request are delivered in duplicate with accompanying stamped self-addressed envelopes, copies may be returned with Consultant's decision in advance.

B. Step Two – Product Acceptance

1. Upon award of a construction contract, accepted manufacturers may submit for review to the Consultant specific products, materials or equipment items as substitutes for those specified. Audio-Visual Contractor to provide letter stating they will reimburse Consultant to review substitutions.
2. Consultant will review substitute products for performance, appearance and suitability for inclusion in the Work. If a substitute product is not accepted, submit another product by the same or other accepted manufacturer or provide the specified product.
3. Match specified colors and dimensions exactly, whether or not they are standard with substitute product, unless a minor variation is accepted by the Consultant.
4. If a substitute product is accepted, coordinate any necessary changes in other related work and pay for these changes. Pay cost of architectural or engineering services, if any, required to incorporate substitute products in the Work.

SUBSTITUTIONS BY CHANGE ORDER

- A. A substitution for a specified product may be permitted by “change order” at no additional cost to the Owner if product proposed is determined to be equivalent in performance and suitability, and if at least one of the following conditions apply:
 1. Owner is given a credit for the work.
 2. Product is of superior quality than product specified.
 3. Products specified and upon which building is designed have been discontinued by manufacturer.
- B. Provide Consultant, through Owner, reasonable compensation for product evaluation.

PART 3: PROJECT CLOSEOUT

GENERAL

- A. Comply with requirements stated in Conditions of the Contract Documents and in Specifications for administrative procedures in closing out the Work.
- B. Related requirements in other parts of the Project Manual
 - 1. Fiscal provisions, legal submissions and additional administrative requirements: Conditions of the Contract.
- C. Related requirements specified in other sections
 - 1. Closeout Submissions Required: The respective sections of specifications.

SUBSTANTIAL COMPLETION

- A. Refer to the Contract Documents.
- B. When the Project is determined by the Consultant to be sufficiently complete to permit utilization for the intended use, the Audio-Visual Contractor will issue a Certificate of Substantial Completion.
- C. To receive the Certificate of Substantial Completion, perform the following:
 - 1. Submit to the Consultant a notice declaring that Work is believed to be substantially complete.
 - 2. Submit a list of Work items that remain to be completed or corrected and the date this work will be accomplished.
 - 3. Obtain Occupancy Certificate when required from governing municipality.
- D. Consultant will visit the project to evaluate the request for issuance of a Certificate of Substantial Completion.
 - 1. If the Consultant concurs that the Project is substantially complete, the Consultant will deliver a Certificate of Substantial Completion and a list of Work items necessary for completion or correction prior to request for inspection for final completion.
 - 2. If the Consultant determines that the Work is not substantially complete, the Consultant will deliver to the Audio-Visual Contractor a written statement including reasons.
 - 3. Complete Work on the items required by the Consultant for achieving substantial completion and make additional written requests for issuance of a Certificate of Substantial Completion until the Consultant determines that sufficient Work has been performed.

FINAL INSPECTION

- A. When the Work is considered complete, submit written certification that:
 - 1. Contract Documents have been reviewed
 - 2. Work has been complete and inspected by the Audio-Visual Contractor for compliance with Contract Documents and is ready for final inspection.
- B. Consultant will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

- C. Should Consultant consider that the Work is incomplete or defective:
 - 1. Consultant will notify the Audio-Visual Contractor in writing, listing the incomplete or defective Work.
 - 2. Take immediate steps to remedy the stated deficiencies and send a second written certification to Consultant that the Work is complete.
 - 3. Consultant will re-inspect the Work.
- D. When the Consultant finds that the Work is acceptable under the Contract Documents, he will request preparation of closeout submissions.

RE-INSPECTION FEES

- A. Should Consultant perform re-inspections due to failure of the Work to comply with the claims of status of completion made by the Audio-Visual Contractor:
 - 1. Owner will compensate Consultant for such additional services.
 - 2. Owner will deduct the amount of such compensation from the final payment.

CLOSEOUT SUBMISSIONS TO CONSULTANT

- A. When the Consultant has determined that the Work is acceptable and the Contract Documents fully performed, prepare and submit final Application for Payment to the Consultant together with the following:
 - 1. A letter recommending acceptance of the Project and indicating all punch list items are complete.
 - 2. Project Record Documents, if required.
 - 3. Warranties and Bonds

FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to Consultant.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - a. Previous Change Orders
 - b. Allowances
 - c. Unit Prices
 - d. Deductions for uncorrected Work
 - e. Penalties and Bonuses
 - f. Deductions for liquidated damages
 - g. Deductions for re-inspection payments and costs incurred by Consultant if project is not closed out within sixty (60) days of Substantial Completion.
 - h. Other adjustments
 - 3. Total Contract Sum, as adjusted.
 - 4. Previous payments.
 - 5. Sum remaining due.
- C. Consultant will prepare a final Change Order, reflecting approved adjustments to the Contract Sums which were not previously made by Change Order.

FINAL APPLICATION FOR PAYMENT

- A. Submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 4: OPERATING, MAINTENANCE AND WARRANTY DATA

GENERAL

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under the Contract.
- B. Prepare operating, maintenance and warranty data as specified in the Project Manual.
- C. Instruct Owner's personnel in the maintenance of products and in the operation of equipment and systems.
- D. Related requirements specified in other sections:
 - 1. Shop drawings, product data and samples.
 - 2. Project Closeout.
 - 3. Project Record Documents.

QUALITY ASSURANCE

- A. Preparation of data shall be done by personnel with the following qualifications:
 - 1. Trained and experienced in maintenance and operation of the described products.
 - 2. Completely familiar with requirements of the Contract Documents.
 - 3. Skilled as a technical writer to the extent required to communicate essential data.
 - 4. Skilled as a draftsman competent to prepare required drawings.

FORM OF SUBMISSIONS

- A. Prepare data in the form of an instructional manual for use by the Owner's personnel.
- B. Format shall conform to the following:
 - 1. Size: 8 ½" x 11"
 - 2. Paper: 20 pound minimum, white for typed pages.
 - 3. Text: Manufacturer's printed data or neatly typewritten.
 - 4. Drawings:
 - a. Provide reinforced punched binder tab, bind in with text.
 - b. Fold larger drawings to the size of the text pages.
 - 5. Provide fly-leaf for each separate product or each piece of operating equipment.
 - a. Provide typed description of product and major component parts of equipment.
 - b. Provide indexed tabs.
 - 6. Cover: Identify each volume with typed or printed title "OPERATING, MAINTENANCE AND WARRANTY INSTRUCTIONS". List:
 - a. Title of Project.
 - b. Identity of separate structure as applicable.
 - c. Identity of general subject matter covered in the manual.
- C. Binders
 - 1. Commercial quality three-ring binders with durable and cleanable plastic cover.
 - 2. Maximum ring size: 2 inch.
 - 3. When multiple binders are used, correlate the data into related consistent groupings.

CONTENT OF MANUAL

- A. Arrange neatly typewritten table of contents for each volume in the following systematic order.
 - 1. Audio-Visual Contractor, name of responsible principal, address and telephone number.
 - 2. A list of each product required to be included, indexed to the content of volume.
 - 3. List, with each product, the name, address and telephone number of:
 - a. Audio-Visual Contractor.
 - b. Maintenance Contractor, as appropriate.
 - c. Identify the area of responsibility of each.
 - d. Local source of supply for parts and replacement.
 - e. Include warranty information as specified.
 - 4. Identify each product by product name and other identifying symbols such as set in Contract Documents.
- B. Product Data
 - 1. Include only those sheets which are pertinent to the specific product.
 - 2. Annotate each sheet to:
 - a. Clearly identify the specific product or part installed.
- C. Content, for moisture-protection and weather-exposed products:
 - 1. Manufacturer's data, giving full information on products.
 - a. Applicable standards
 - b. Chemical composition
 - c. Details of installation
 - 2. Instructions for inspection, maintenance and repair.
- D. Additional requirements for maintenance data: The respective section of the Project Manual.

SUBMITTAL SCHEDULE

- A. Submit one (1) copy of completed data in final form with thirty (30) days of substantial completion. Copy will be returned with comments
- B. Submit two (2) copies of approved data in final form ten (10) days after comments are received.

III. SPECIFICATIONS

ARCHITECTURALLY INTEGRATED AUDIO-VIDEO EQUIPMENT

COUNCIL CHAMBERS AND CONTROL ROOM

PART 1 – GENERAL

SUMMARY

- A. The objective of this document is to describe audio-visual systems.

INCORPORATED DOCUMENTS

- A. The Specifications include the “Audio-Visual Drawings”, which are considered to be incorporated herein.

DEFINITION OF TERMS

- E. The following definitions shall apply herein:
1. The term “Owner”: City of Edina
 2. The term “Consultant”: TouchPoint Logic
 3. The term “Audio-Visual Contractor”: The successful bidder responsible for the complete installation of the audio-visual systems specified herein.
 4. The term “shall” is mandatory, the term “will” is informative, the term “may” describes an option and the term “should” is advisory.
 5. The term “Project” shall refer to the audio-visual systems outlines in this document.
 6. The term “By Others” shall refer to material and work that is related to the AV Sub-Contract and for which the Audio-Visual Contractor is not responsible except as otherwise detailed herein.
 7. The term “OFE” shall refer to “Owner Furnished Equipment” which will be provided by the Owner to the Audio-Visual Contractor. The Audio-Visual Contractor shall be responsible for installing and integrating this equipment as detailed herein.
 8. The term “NIC” shall mean “Not In Contract” which the Owner or other contractors may provide. The Audio-Visual Contractor shall be responsible for providing cabling, plate and other infrastructure as indicated on the drawings and herein so as to provide “plug and play” ready installation of all NIC equipment.
- F. The basis for the terminology used in this document is standard construction and sound & communications industries practices and that of the IEEE Standards Dictionary: Glossary of Terms & Definitions.

WORK BY OTHERS

1. Conduits, wire ways, connection boxes, pull boxes, junction boxes, A/V floor boxes and outlet boxes permanently installed in floors, walls and ceilings.
2. All electrical breaker panels and power receptacles necessary to bring power to the audio-visual systems equipment racks and to devices in the Project as indicated in the drawings.
3. Room lighting fixtures, dimmers, power receptacle outlet and interconnecting wiring for these circuits.

4. Structural work, wall openings, platforms, railings, stairs, fire prevention and safety devices, rough and finished trim, painting and patching, drapes, carpets, floor coverings, computer floors, glazing, acoustical treatment heating, ventilating and air conditioning systems unless noted otherwise.
5. Moveable furniture, desks and chairs.
6. See Construction Documents for reference to items marked "Not In Contract" and/or "By Others".

SCOPE OF WORK

- A. Provide materials, labor and equipment including but not limited to:
 1. The delivery, unloading, setting in place, fastening to walls, floors, ceilings, counters, or other structures where required.
 2. Provide low voltage cable as per Audio-Visual drawings or as required to deliver a fully functional system.
 3. Final terminations, dressing and testing of all Audio-Visual Cabling inclusive of cables pulled by others.
 4. Interconnecting wiring of the system components and equipment alignment and adjustment.
 5. All other Work whether or not expressly specified herein and on the drawings to provide complete operational turnkey systems.
- B. These specifications and the drawings do not necessarily indicate every single component part of each system. It is the responsibility of the Audio-Visual Contractor to engineer each system and its interconnection in order to provide, furnish and install completely operational turnkey systems. No error or omission herein or on any related Construction Documents shall relieve the Audio-Visual Contractor from this responsibility to do so.
- C. Install all equipment to industry safety and ergonomic standards and provide full engineering and technical support throughout the installation process.
- D. The Audio-Visual Contractor shall study the drawings and familiarize themselves with the Work of the entire project scope. The Work shall be carefully organized and programmed so that its progress shall be concurrent with the work of all other trades and so that the work shall proceed as expeditiously as possible.
- E. The Audio-Visual Contractor shall be responsible for the correct placing of the Work, equipment to fit into the structure as built and attachment of equipment to the Work of all other trades and owner furnished equipment and facilities.
- F. It shall be the responsibility of the Audio-Visual Contractor to coordinate with those performing related work and to interface other systems with the Work. The Audio-Visual Contractor shall ensure that the work by others shall integrate properly with the Work of and that all such work collectively complies with all requirements as specified herein.
 1. Coordination shall include providing timely submittal and field coordination of mounting requirements, dimensions and any other information required by other trades.
 2. Maintain frequent communications with all designated personnel of the Consultant and attend all construction meetings as requested by the Consultant.
- G. The Audio-Visual Contractor shall generate all shop drawings and information for the complete installation and wiring of the system. The Audio-Visual Contractor shall provide pull schedules and riser diagrams for the on-site installation and wiring and shall provide on-going supervision and coordination during the implementation phase. The Audio-Visual Contractor shall provide pre-printed wire labels numerically organized for signal type and cable count according to the engineering documentation & shop drawings.

- H. Where there is a discrepancy between drawings or between drawings and documents, the Audio-Visual Contractor shall conform to the guidelines below. The Audio-Visual Contractor shall consider all the information in combination and not consider one element alone to meet a minimum requirement. The guidelines are as follows:
1. Room layouts indicate device locations.
 2. Architectural and Electrical drawings indicate the location of all floor boxes; back box and all conduit interconnect points as shall be installed as an infrastructure by the Electrical Contractor. These drawings are to inform the Electrical Contractor as to all points within the facilities for cable and connector plate installation.
 3. Audio-Visual detailed block diagrams to indicate general signal flow and interconnection of devices.
 4. The Audio-Visual specifications delineate minimum performance requirements, methodologies and the design intent.
 5. Where there is a conflict in number or type of device specified, the drawings shall govern.
- I. System Interconnections
1. The functional interconnections of the audio, control and video systems shall comply with the manufacturer's system installation guidelines industry standard practices and as specified herein.
 2. The Audio-Visual Contractor shall provide all interconnection cable, connectors, terminal strips, wire way, flexible conduit, raceways, etc., to facilitate the audio-visual systems as detailed within these specifications and drawings.
 3. The Audio-Visual Contractor shall provide all custom connector panels required.
- J. The Audio-Visual Contractor shall be fully responsible for the coordination of the control system or the sub-contract of a control system programmer. Further, the Audio-Visual Contractor shall be responsible for coordinating the on-site programming, software de-bugging and revising custom screens after initial use.
- K. The Audio-Visual Contractor shall be responsible for the comprehensive adjustment of the systems as specified herein and shall provide all test equipment for the system checkout and acceptance tests. Audio-Visual Contractor shall provide on-the-job training in systems operation and maintenance to Owner designated personnel.
1. Adjust and balance all circuits as specified herein. Set all controls and software parameters to render fully and optimally operating systems and subsystems. All computer controlled functions require complete audio/computer/software setup, balancing, label-entry and documentation.

SUBMISSIONS

The Audio-Visual Contractor shall submit to the consultant at least two (2) full sets of pre-construction submissions as described in this Project Manual unless instructed otherwise by the Consultant.

A. Conduit and Cabling Submissions

1. Submit for approval all cable pull schedules and/or run sheets prior to cable installation. Documentation of the entire conduit and cabling installation shall be fully performed to construction documentation standards by the Audio-Visual Contractor as specified herein.

B. System Design Submissions

1. Prior to fabrication the Audio-Visual Contractor shall submit for approval, all designs pertaining to the systems. These designs include, but are not limited to the following:
 - a. Complete system construction and point-to-point wiring schematic drawings, including all components and showing complete letter and number identification of all wire and cable as well as jacks, terminals and connectors.
 - b. All cut sheets related to equipment and components supplied by the Audio-Visual Contractor.
 - c. All panels, plates and designation strips, including details relating to terminology, engraving, finish and color.
 - d. All custom designed consoles, tables, carts, support bases and shelves.
 - e. Schematic drawings of all custom components, assemblies and circuitry.
 - f. All equipment modifications.
 - g. Front mechanical drawings of each equipment rack.
 - h. All items of equipment whether a stock manufactured item or custom built shall be supported by complete and detailed schematic drawings and replacement parts list. No unidentified components shall be acceptable.

C. Equipment Substitution Submissions

1. When submitting a request for substitution or deviation, include:
 - a. Descriptions of the total foreseeable effect of the substitution or deviation upon the design of the Work and agree to be directly responsible for any resultant extra costs.
 - b. Note: materials and equipment proposed as being in compliance with or in deviation from specified standards or as a substitute for specified items shall be indicated as soon as possible. Upon receiving disapproval for any item, the Audio-Visual Contractor shall immediately resubmit a revised list for approval and thereafter, continue to resubmit a revised list until complete written approval of all items has been obtained.

D. System Installation Submissions

1. Maintain week-by-week Work Progress schedules keyed to personnel, vendors and tasks as specified herein and provide schedule updates as requested by the Consultant or Owner.

E. Close-out Documents

1. At the completion of the installation, the Audio-Visual Contractor shall provide the following item and submit two (2) sets of each. The Owner shall not sign off on any system or submit final payment to any contractor who has not delivered these items.
 - a. Equipment manufacturer's operation and maintenance manuals for each piece of equipment, bound in a three (3)-ring binder. Include an "as modified" drawings pertaining to any equipment that has been modified by the Audio-Visual Contractor.
 - b. A full set of "As Built" or "As Installed" drawings showing all final connections and field wiring numbers.
 - c. A simplified functional block drawing identical to the specification drawing with the addition of all input and output circuit cable and terminal block numbers as well as all jack field circuit I.D. designations. A copy of this drawing shall be provided for display in the control room.

- d. The Audio-Visual Contractor shall provide the information necessary for proper maintenance of the Audio-Visual system along with a simplified "Quick Start" or "Executive Summary" on one 8 ½" by 11" sheet describing the most basic functions. Laminated copies of this instruction sheet should be located for easy access by the user.
- e. Electronic Submissions – The Audio-Visual Contractor shall supply all System Operation manuals, Operational and Maintenance Instructions, As-Built Drawings and Documentation, Crestron & DSP Processor Source code, any Programming, and Settings as Microsoft Word or PDF data files published on CD-ROM.

QUALITY ASSURANCE

A. Audio-Visual Contractor Qualifications

1. Audio-Visual Contractor shall be a firm with at least five (5) years' experience in the fabrication, assembly and installation of audio-visual systems of similar magnitude and quality as specified herein, and shall provide documentation with the bid submission. This documentation must identify, specifically, similar projects of the same or greater scale and complexity. Of those projects noted, the bidder must provide current contact names and telephone numbers, as well as a job description with a clear delineation between labor and equipment costs, as well as duration of project. The descriptions supplies must clearly indicate the firm submitting the bid response has actively been involved in these projects and that the firm has actively been involved for at least five (5) years in projects of this magnitude.
2. The supervisor of the Work shall have at least five (5) years direct professional experience with devices, equipment and system installation of the type and scope specified herein.
3. At least one supervisory level staff person shall be Certified Technology Specialist (CTS) Certification.
4. All personnel engaged in the installation shall have at least three (3) years direct experience with devices, equipment and system installations of the type and scope specified herein.

B. Quality of Materials and Equipment

1. All materials and equipment supplied by the Audio-Visual Contractor shall be new and shall meet or exceed the latest published specification of the manufacturer in all respects.
2. The Audio-Visual Contractor shall supply the latest model, available at the time of bidding, of each of piece of equipment.
3. The materials and completed Work shall conform to the applicable requirements of all current local and state codes and of the following reference codes:
 - a. Occupational Safety and Health Act (OSHA) of 1970 and all amendments thereto
 - b. National Electrical Code, as amended by all state and local codes.
 - c. Uniform Building Code.
 - d. Other Authorities having jurisdiction.

TIMELY DELIVERY AND STORAGE

- A. Timely delivery and installation of material required for the Work is the responsibility of the Audio-Visual Contractor. The Audio-Visual Contractor shall be held responsible for all delays associated with both specified and alternate materials and for the timely submittal of proposals, submittal items, drawings and other information in order to expedite the Work and to avoid delays.
- B. Costs of all shipping to the site and of all storage requirements shall be borne by the Audio-Visual Contractor. It shall be the responsibility of the Audio-Visual Contractor to make appropriate arrangements, and to coordinate with authorized personnel at the site, for the proper acceptance.
- C. During the installation, and up to the date of final acceptance, the Audio-Visual Contractor shall be under obligation to protect his finished and unfinished Work against damage and loss. In the event of such damage or loss, he shall replace or repair such work at no cost to the Owner.

PROJECT SITE CONDITIONS

- A. The Audio-Visual Contractor shall be responsible to survey all areas to locate poke-thrust, furniture openings, sleeves, conduits, cable trays, conduit stub-ups, back boxes and pull boxes provided by others for audio-visual cabling.
- B. The Audio-Visual Contractor shall be responsible for verifying on-site conditions of all systems, equipment and conditions that directly or indirectly affect the Audio-Visual Contractor's scope of work to include but not limited to:
 - 1. All power and conduit installed as per consultant's drawings.
 - 2. All Audio-Visual devices installed such as: projection screens, screen low-voltage control interfaces, video projector and plasma lifts, Audio-Visual back boxes, Audio-Visual floor boxes, room lighting Audio-Visual interfaces and window shade low-voltage control interfaces.
 - 3. All Audio-Visual related CATV, data and network lines as specified by the consultant.
 - 4. All Audio-Visual related furniture installed such as lecterns, credenzas, board/conference tables, closets and other millwork designed to house Audio-Visual equipment.
- C. The Audio-Visual Contractor shall be responsible for meeting project schedule dates.
- D. The Audio-Visual Contractor shall be responsible for the protection of all installed and configured systems as well as non-installed stored materials from acts of theft.
- E. Audio-Visual Contractor shall be responsible for protection of his work from acts of vandalism and environmental conditions. Any delivery schedules affected by environmental conditions shall be noted to the Consultant not less than seventy-two (72) hours prior to day of scheduled delivery with just cause documented in writing.

SEQUENCING AND SCHEDULING

- A. The Audio-Visual Contractor shall maintain a running progress report. The Audio-Visual Contractor shall submit this report upon request of the consultant at any time during the contract period. This report shall include but is not limited to:
 - 1. Time line for each major installation activity.
 - 2. Illustrate how start of a given activity depends on completion of preceding activities and how completion of a given activity may restrain start of subsequent activities.
 - 3. Requests for utility service disconnection and connections.

4. Delays and stoppages – any delays or stoppages shall not affect the scheduled completion date unless instructed otherwise by the Consultant.
5. Emergencies and accidents.
6. Losses of materials and property.

GUARANTEE AND MAINTENANCE

- A. The Audio-Visual Contractor shall guarantee all equipment and cabling, programming and software furnished in writing against defect in workmanship and material for a period of ONE (1) YEAR from the date of final acceptance. All defects developing during that period shall be corrected in compliance with the “GUARANTEE” conditions under these specifications.
- B. The Audio-Visual Contractor shall service the complete installation during this one (1) year guarantee period.
- C. This Guarantee clause shall in no way preclude or nullify any manufacturer’s warranties. All manufacturer warranty cards shall be sent to the respective manufacturers with photo-copies showing model number and serial numbers to be included with a certificate of warranty and to be delivered to the Owner by the Audio-Visual Contractor.
- D. All equipment and systems provided shall be guaranteed to be free from defects in materials and workmanship for a period as indicated in the Contract Documents from the date of final acceptance, provided it does not show abuse.
- E. The Audio-Visual Contractor shall maintain regular service facilities and provide a qualified technician familiar with the Work, at the site, within twenty-four (24) hours of receipt of a notice of malfunction from the owner or his representative. As part of this guarantee, the Audio-Visual Contractor shall provide, at no expense to the Owner, all material, devices, equipment and personnel necessary and provide alternate facilities, services and systems for the duration of the repairs.
- F. All repairs and service under this guarantee shall be at the job site unless in violation of manufacturer’s warranty and/or practically not possible.
- G. Transportation of warranty substitute equipment, devices, material, parts and personnel to and from the job site shall be at no expense to the Owner, provided it does not show abuse.
- H. Warranty Statement
 1. To maintain certain manufacturer’s warranties, equipment must be installed, aligned and serviced by those installers authorized by manufacturer to perform those duties. If manufacturer does not authorize the Audio-Visual Contractor, it is the Audio-Visual Contractor’s responsibility to make the appropriate arrangements and bear all cost and consequences thereof.
 2. All equipment provided by the Audio-Visual Contractor shall be new and shall meet or exceed the latest published specifications of the manufacturer in all respects.
 3. Upon completion of all Work and compliance with all requirements of the Contract Documents, including submissions, tests, record drawings and data as required herein, the Owner may elect to verify the Audio-Visual Contractor’s test data as part of the acceptance procedure. The Audio-Visual Contractor shall provide personnel and equipment, at the convenience of the Owner, to demonstrate any aspect or parameter of system performance and to assist the Owner with such tests. All costs associated with acceptance testing shall be the responsibility of the Audio-Visual Contractor.

SERVICE CONTRACT OPTION

- A. The Audio-Visual Contractor shall offer a separate annual service contract covering all installed systems. This service contract shall cover a minimum of four (4) visits per year, at regular intervals, to perform operation checks of the equipment and maintenance as recommended by the respective manufacturers. The service contract shall commence immediately after expiration of the initial base-bid warranty period and continue for one (1) year. This service contract may be renewed under separate agreements between the Audio-Visual Contractor and the owner.
- B. The Audio-Visual Contractor shall also submit separate costs for emergency situation “on-call” service visits and an “in-shop” hourly-rate for repair and maintenance work as part of the post-guarantee period herein.
- C. This “Service Contract” shall not in any way conflict with the first year warranty covered as specified herein. The intent of this paragraph is for the Owner’s option in preparing budgets and comparing long-term costs between vendors. As such the Bidder shall provide costs for year two and three to include cost escalations.

PARTS 2 – SYSTEMS AND EQUIPMENT

SYSTEM DESCRIPTIONS – This section of the specifications defines the details of the Audio-Visual systems to be furnished and installed at the CITY OF EDINA COUNCIL CHAMBERS. For additional system information, refer to the Audio-Visual system diagrams and itemized equipment lists. Products meeting the performance standards of the equipment suggested on the itemized equipment will be accepted. Bidder understands that in the event their substitute product is determined to not meet the standards of the suggested product their bid may be considered incomplete. The bidder may agree to provide the suggested equipment at the cost of the bid product or the suggested product, whichever is less.

A. Crestron Multi-Functionality

1. The Crestron Control equipment specified for this Work shall be employed to support the Audio-Visual Systems for the Council Chambers on several levels.
2. The Crestron Control system will utilize a color LCD control touch panel. Control of audio and visual sources functions and room volume will be available. Remote Control System shall be capable of controlling the system switchers, TV monitors, DVD recorder, audio system volume levels, existing lighting control system and as well as other devices as specified in this document.

B. Audio System

1. Existing audio system, including Biamp Nexia(s), Microphones, speakers, and amplifiers to remain, except where noted. Crestron program to include control all existing audio equipment. There shall be a toggle action button to select if the microphone buttons operate in a mute/unmute mode or a request to speak mode, controlled via touch panels.

C. Council Chambers Audio-Visual Specification

1. Council Dais

- a. Two (2) Smooth Black 5" Touch Screen (TSW-552-B-S) with Table Top Kit (TSW-550-TTK-B-S).
- b. One (1) Smooth Black 10.1" Touch Screen (TSW-1052-B-S) with Table Top Kit (TSW-1050-TTK-B-S).
- c. Thirteen (13) 22" HD monitors with HDMI input to be mounted on a pole mount to be attached to the recessed trough in the dais. Pole to be modified, if necessary, to not protrude above dais top. Monitors will not be controlled via Crestron, however they must enter standby mode upon loss of signal and power on when a signal is present.
- d. One (1) 1x16 HDMI video DA to distribute video from Crestron DM-RMC-Scaler-C to all 13 dais monitors. DA and RMC-Scaler shall be located in new equipment rack under the dais center.
- e. Three (3) DM-TX-201-C for laptop connection. User cables to be routed through existing flip-top boxes in dais.
- f. AV Contractor to re-wire existing CNPI -16 under dais that controls the mic logic and attach it to the new equipment rack under the dais.

2. Audience monitors
 - a. Two (2) DM-RMC-Scaler-C to supply video and control to two (2) existing audience monitors.
 - b. One (1) DM-RMC-Scaler-C to supply video and control to existing monitor in Lobby.
3. Production Cameras
 - a. Five (5) Sony BRCZ330 cameras with BRBKIP10 HD/SDI output cards and appropriate wall mount brackets. Four cameras are to replace existing cameras. Camera #5 will be mounted next to the back center camera. New HD-SDI cables to be routed to production switcher.
 - b. Existing document camera to be connected to the DM switcher via existing HD-SDI Input Card already installed in camera. New HD-SDI cable to be installed. AV Contractor must access the camera to change switch setting on card to HD.
4. Podium
 - a. One (1) DM-TX-201-C for presenter laptop connection, cables to be routed through existing flip top box.
 - b. One (1) DM-TX-201-C for host pc connection.
 - c. One (1) DM-RMC-Scaler-C for routing video back to podium for preview of presentation sources, including doc cam and host computer.
 - d. One (1) 22" HD monitor with HDMI input Monitor will not be controlled via Crestron, however it must enter standby mode upon removal of signal and power on when a signal is present.
 - e. One (1) FT-TS600 flip-top touchscreen for source selection and doc cam control.
 - f. Two (2) Audio Technica U851A Cardioid Condenser Boundary Microphones to replace to existing center microphones.
 - g. Option 1 - One (1) DM-TX-201-C for DVD-Blu-Ray connection.

C. Control Room Audio-Visual Specification

The Control Room for the Audio-Visual System shall contain the necessary furniture, equipment racks and shelving to accommodate all of the Audio-Visual Systems required to execute live and recorded video production. Audio-Visual Contractor must remove all unnecessary wire within the control room. Audio-Visual Contractor must also remove all unused existing equipment in the control room and verify with owner for recycling of used equipment and disposal.

1. New Production desk with room for production switcher and large monitor.
2. Creston control system including one (1) Pro3 control processor, TPMC-V15-B mounted on a fully adjustable Dual Arm Desk Mount (K1D120B) by Chief. This is not owner furnished equipment.
3. New production switcher(OFE) to be integrated by AV contractor.
4. One (1) 22" HDTV TV monitor to be connection to Comcast tuner via HDMI. This monitor shall be mounted to the Production Desk.
5. One (1) 42" HD monitor to serve as the multi-viewer monitor for the production switcher.
6. Two (2) 22" monitors to serve a PC monitors mounted to the production desk.
7. One (1) 44U, 28" Deep equipment rack with front and rear doors. This is not owner furnished equipment.
8. One (1) 14 space 19" rolling equipment rack to fit under the production desk.
9. Network control cards for existing UPS equipment.

10. One (1) DM-MD16x16 video switcher with necessary input and output cards.
11. One (1) Audio Technica AEW 5413a wireless microphone system. Verify frequency spectrum to match existing system and antenna distribution system.

D. Crestron Control/Touchscreen Programming Requirements

TPMC-V15 touch screen display in Control Room

1. Full control of all dais microphones including volume gain and muting with appropriate feedback, and master gain (or mute of all dais microphones as a group, and all hanging microphones as a group) in a visually easy to operate manner.
2. Control of existing lighting/dimming system.
3. Master controls including the ability to start the meeting with as few button presses as possible. This includes starting all recorders (new and/or existing) with a single “record” button. A Master Power on/off button to turn on/off the system including monitors, lighting presets, audio presets, etc.
4. Scheduler to turn on lights to a selected preset on a daily basis.
5. Gavel Timer controls, if required.
6. Video switching controls to select which document camera/presentation input is live.
7. Ability to select sources for each TV/Projector separately, i.e. program on left and doc cam on right.
8. Document Camera Controls.
9. Control of monitors in control room for power on/off with system.
10. Control of audience monitors in chamber.

TWS-552 at Staff Table (left side)

Same controls as TPMC-V15 in Control Room, with some modifications, including:

1. Simplified microphone controls
2. Does not need master record functions
3. Input selector of presentation inputs
4. Doc Cam controls

TWS-552 (Mayor)

1. Gavel Timer Controls, including adjusting the time of green and yellow indicators (if requested).
2. Request to speak and muting controls.
3. Time of day clock.
4. “Ready to start meeting” button that shows on other Touch Screens.

TWS-1052 at Staff Table (right side)

1. Full control of all dais microphones including volume gain and muting with appropriate feedback, and master gain (or mute of all dais microphones as a group, and all hanging microphones as a group) in a visually easy to operate manner.
2. Control of existing lighting/dimming system.
3. A Master Power on/off button to turn on/off the system including monitors, lighting presets, audio presets, etc.
4. Scheduler to turn on lights to a selected preset on a daily basis.
5. Gavel Timer controls.
6. Video switching controls to select which document camera/presentation input is live.
7. Ability to select sources for each TV/Projector separately, i.e. program on left and doc cam on right.
8. Document Camera Controls.
9. Control of audience monitors in chamber.

FT-TS Flip-Top Touch Panel

1. Presentation input selection
2. Doc-Cam controls

GENERAL REQUIREMENTS

- A. All power supplies, cables, wires, rack-mounts, interconnects, brackets, etc., shall be included while they may not be specifically called out herein.
- B. All equipment shall be new and the latest model number and revision as of the proposal date.
- C. Material and equipment specified herein have been selected as the basis of acceptable quality and performance and have been coordinated to function as component parts of the included systems. Where a particular material, device, equipment or system is specified directly, the current manufacturer's specification for it shall append these specifications.
- D. Subject to the functional and minimum performance requirements for each item, the Consultant may require information demonstrating the equivalence of certain alternative equipment not fully or adequately described by the technical specification of the manufacturers. Any and all costs arising from equivalency testing shall solely and completely be the responsibility of the Audio-Visual Contractor.
- E. Verify with all manufacturers and/or suppliers availability and cost of all material and equipment proposed, including all material and equipment specified herein. NO cost increases shall be allowed for manufacturers cost increases or for substitutions required because of unavailability of proposed equipment.
- F. The manufacturer specifications shall be considered as minimum performance levels of acceptance. Where a particular model is specified its performance, operating and physical characteristics are part of these specifications. Further, these characteristics are part of a design as a whole and particularly the Consultant's designs are in full coordination with these characteristics.
- G. All equipment must function with Creston control system hardware and software including recording equipment and lighting control for video.

CUSTOM EQUIPMENT RACKS PANELS

- A. Standard EIA specifications, nominal 19-inches wide, number of spaces as indicated or required.
- B. Material shall be brushed and anodized aluminum, minimum 0.125-inch thick.
 - a. Finish black anodized.
 - b. White filled engraving
 - c. Typeface shall be 14 point Helvetica Bold
 - d. Provide panel stiffeners as required to prevent panel deformation during normal plugging and switching operations.
 - e. Mounting screws shall be matching stainless or black flathead screws with lock washers.

PART 3 – EXECUTION

EQUIPMENT LAYOUT

- A. The equipment layout and locations shall be as details herein and in the audiovisual section of the drawings as well as all architectural drawings that pertain to this area.

PROJECT MEETINGS

- A. It shall be the responsibility of the Audio-Visual Contractor to supply any necessary requested information and have its project supervisor in attendance at all project meetings in order to coordinate with all related trades.

COORDINATION

- A. All the Work shall be coordinated with the current operation of the system(s).
- B. The Audio-Visual Contractor shall coordinate the finish required for all fixtures, plates, panels, grilles and enclosures supplied as part of this specification section with the Consultant and Owner. The Audio-Visual Contractor shall supply finish samples as requested by the Consultant or Owner.
- C. The Audio-Visual Contractor shall be responsible for coordination with the Millworker for any audio-visual items to be built or mounted into millwork.
- D. It shall be the responsibility of the Audio-Visual Contractor to cooperate at all times with all contractors doing work in the building to the end that lost time, work stoppages, interference and inefficiencies do not occur.
- E. Maintain constant communications with all designated personnel of the Consultant and attend all meetings as designated by the Consultant.
- F. Perform field surveys to determine existing cabling and mechanical conditions. Verify existing as-builds including cable labeling and ensure new documentation and installation cabling is coordinated and appropriately labeled.

WORKMANSHIP

- A. Maintain a competent supervisor and supporting technical personnel, acceptable to the Consultant and Owner during the entire installation. The Audio-Visual Contractor shall submit the name and contact information of the supervisor. Change of supervision during the Work is not acceptable without prior written approval from the Consultant.
- B. Adjust and balance all equipment to provide optimum operation. Set all controls and software parameters to render a fully and optimally operating systems and subsystems. All computer controlled functions shall require complete audio/computer/software setup, balancing, label-entry and documentation.
- C. Install all equipment to industry safety and ergonomic standards and provide full engineering and technical support throughout the installation process.

FABRICATION & INSTALLATION

- A. All installation practices shall be in accordance with, but not limited to, specifications and drawings. Installation shall be performed in accordance with applicable standards, requirements and recommendations of authorities having jurisdiction.
- B. If, in the opinion of the Audio-Visual Contractor, an installation practice is desired or required, which is contrary to specifications or drawings, a written request for modification shall be made to the Consultant. Modifications shall not commence without written approval from the Consultant.
- C. Provide intelligible, permanent identification on or adjacent to all patching jacks, connectors, receptacles, terminal blocks, meters, indicators, switches, equalizers, mixers, amplifiers, etc. The identification shall clearly indicate the function or circuit.
- D. The Audio-Visual Contractor must take such precautions as are necessary to guard against electromagnetic and electrostatic hum, to supply adequate ventilation and to install the equipment so as to provide maximum safety to the operator.
- E. Care shall be exercised in wiring so as to avoid damage to the cables and to the equipment. All joint and connections shall be made with rosin-core solder or with mechanical connectors approved by the Consultant.
- F. All wire and cabling shall be continuous and splice free for the entire length of run between designated connections or terminations.
- G. When connecting stranded wire to compression screw terminals do not tin the wire ends. When inserting wires into a compression terminal take proper care to insert only the stripped portion of the cable.

EQUIPMENT RACK FABRICATION

- A. Wire each equipment rack as a unit to self-contained terminal strips. All connections to adjacent equipment racks and/or control lines and output lines shall be made via terminal strip connections.
- B. Install all rack-mounted equipment and devices in equipment racks in a logical, functional manner, demonstrative of signal flow within the respective system arranged for easy accessibility and convenient maintenance.
- C. Install equipment in racks with ventilating panels as required to provide adequate ventilation and according to equipment manufacturer's recommendations.
- D. Provide AC outlets within each rack and appropriately circuited to provide power to the installed equipment with one (1) each extra outlet per blank space.
- E. Provide at least one (1) each dedicated AC service outlet per rack.
- F. Ensure that all panel mounting holes are pre-tapped and free of debris.
- G. All power cables, control cables, and high-level cables shall be run vertically on one side of an equipment rack as viewed from the rear. All other cables shall be run vertically on the other side of an equipment rack, as viewed from the rear.
- H. All non-line voltage wiring shall be run within the rack in plastic wiring duct with snap-in slot design, such as Panduit Type E, or equal; and provide snap on duct cover. All wiring between racks shall be fully protected in conduit or enclosed cable trays.
- I. Do not buss the commons of the loudspeaker lines together.
- J. Provide unused panel space with blank or ventilating panels.
- K. Locate free stand racks as shown and provide access to rear without need for moving racks.

- L. Equipment racks of this system shall be firmly attached to each other, both mechanically and electrically, in order to provide a good ground connection between adjacent racks.
- M. Equipment racks of this system shall be totally isolated from equipment racks of other systems.
- N. Provide each rack with protective plastic covers for run sheets, rack elevation and single-line drawings.
- O. All power supplies shall be located, oriented and connected electrically so as to minimize hum and RFI interference. Further, all plug-in type power supplies shall be firmly attached using mechanical fasteners to its associated power receptacle to insure accidental remove and/or connection loss.

EQUIPMENT LABELING

- A. In addition to permanently labeling each cable and termination device, each piece of equipment, device and panel shall have permanent label corresponding to its function as shown on system drawings.
- B. All user cables shall be labeled as to their function. User cables include audio, video, control or other connector cables that the user is required to handle during normal system setup and operation.

GROUNDING

- A. The Audio-Visual Contractor shall follow all standard NEC and local codes for grounding practices on all of the audio-visual equipment and equipment racks.
- B. All RGB video lines to external devices exceeding 100 feet or being powered from different power panels shall have suitable line drivers and isolation as specified herein.
- C. It shall be the responsibility of the Audio-Visual Contractor to follow good engineering practices. At no time shall there be a compromise in safety or any exception to the NEC and local codes.
- D. Insulate all conductors in conduit, including shields, from the conduit, back boxes and from each other for the entire conduit length.
- E. Shields shall be tied to Isolated Ground at the driving or transmitting end of a run or circuit only, unless otherwise noted.

IDENTIFICATION

- A. All installation shall bear the following identification plate, supplied by Audio-Visual Contractor, mounted on the front the main rack:
 - 1. SYSTEMS ENGINEERED & DESIGNED BY: TouchPoint Logic, LLC, Chanhassen, MN 55317. (952) 401-9354
 - 2. SYSTEMS FABRICATED & INSTALLED BY: *Contractor Name, Address and Telephone number.*

DELIVERY OF EQUIPMENT

- A. Ensure that the spaces where any electronic equipment is to be stored and/or installed is completely free from any foreign substances, such as concrete dust, or any other material that may otherwise be harmful to electronic equipment and connections. No allowances shall be made to the Audio-Visual Contractor for equipment damage or delays due to environmental damage.

AC POWER

- A. The Audio-Visual Contractor shall ensure that there are adequate power circuits and the grounding scheme is in accordance with the GROUNDING paragraph herein.

- B. If a dedicated Audio-Visual power system is part of this design, the Audio-Visual Contractor shall ensure that ONLY the audio-visual equipment is connected to the dedicated AC power system.

PHYSICAL INSTALLATION

- A. All equipment shall be firmly secured in place with a safety factor of at least five (5). All hardware shall be SAE Grade 5 minimum and all installation practices shall comply with standard rigging practice, OSHA standards and all building codes.
- B. All boxes, equipment, etc. shall be secured plumb and square.
- C. In the installation of equipment and cable, consideration shall be given not only to operational efficiency, but also to overall aesthetic factors.
- D. All power supplies shall be located, oriented and connected electrically so as to minimize hum and RFI interference. Further, all plug-in type power supplies shall be firmly attached using mechanical fasteners to its associated power receptacle to insure accidental removal and/or connection loss.

CABLE LENGTH & SPLICES

- A. All cables (except video and pulse cables that must be cut to an electrical length) shall be cut to the length dictated by the run. No splices shall be permitted in any pull boxes without prior permission of the Consultant. For equipment mounted in drawers or on slides, the interconnecting cables shall be provided with a service loop of appropriate length.

CABLE INSTALLATION

- A. All cables, regardless of length, shall be marked with wrap-around number or letter cable markers at both ends. There shall be no unmarked cables at any place in the system. Marking codes used on cables shall correspond to codes shown on drawings and run sheets. Clear heat shrink (or equal) shall protect numbers.
- B. All inter-rack cabling shall be neatly strapped, dressed and adequately supported.
- C. For all cables interfacing with racks, cabinets, consoles or equipment modules requiring terminal blocks, boards, strips or connectors these shall be either of the "barrier strip" type, screw down terminal strip or insulation displacement punch down type as manufactured by ADC or Siemon.
- D. All cables shall be grouped according to the signals being carried. In order to reduce signal contamination, separate groups shall be formed for the following cables:
 - 1. Power cables
 - 2. Control cables
 - 3. Video cables
 - 4. Audio cables carrying signals less than -20 dBm
 - 5. Audio cables carrying signals between -20dBm and +20 dBm
 - 6. Audio cables carrying signals above +20dBm
- E. All power cables, control cables and high-level cables shall be run vertically on one side of an equipment rack as viewed from the rear. All other cables shall be run vertically on the other side of an equipment rack, as viewed from the rear.

F. Cables and Connectors

1. Microphone and line level audio signal cable: shielded 20 gauge, stranded 2-conductor cable as required.
2. 70V Ceiling loudspeaker cable: 18 gauge, stranded 2-conductor cable as required.
3. RGB HV Cable: High Resolution shielded RG HV cable as required.
4. Composite Video Cable: High Resolution co-axial cable as required.
5. Control Cable: as required.
6. Miscellaneous Cable: as required.
7. Cables running in plenum areas without conduit shall be plenum rated cable.
8. All cables (except video and sync cables which must be cut to an electrical length) shall be cut to the length dictated by the run. No splices shall be permitted without prior permission of the Consultant. For equipment mounted in drawers or on slides, the interconnecting cables shall be provided with a service loop of appropriate length.
9. No cable shall be installed with a bend radius less than that recommended by the cable manufacturer.

PROGRAMMING

- A. Upon completion all programs and code will be handed over to the City of Edina for ownership. They are not to be password protected or encrypted.

PERFORMANCE

A. AUDIO

1. Audio system must be capable of clear, distortion-free voice and program reproduction at all listening areas.
2. Distribution of sound in the listening area from 250Hz to 4kHz shall vary not more than +/-2.0dB at any location, as measured in octaves with a sound level meter or analyzer.
3. The system shall provide adequate dynamic range at an acoustic distortion level sufficiently low to ensure minimum listening fatigue and intelligibility acceptable to the Owner. The intelligibility is based on listeners not familiar with the message, or talker; no visual cues; normal activity; and moving position both within and between zones.
4. Unless restricted by the published specifications of a particular piece of equipment or unless otherwise required under the Detailed Specifications, the following performance standards shall be met by each system:

B. VIDEO

1. S/N un-weighted DC to 5 mHz 55 dB minimum.
2. Frequency Response Within plus or minus 0.5 dB to 5 MHz.
3. Line and Field-Tilt 2% maximum.
4. Differential Gain 3% maximum.
5. Differential Phase 2 degrees maximum.

C. PERFORMANCE TEST SIGNAL PATHS:

1. The signal paths for the above Performance Standards shall be as follows:
 - a. Audio – from all source inputs (for microphones, audio tape units, video tape units, etc.) through all mixers, audio distribution amplifiers, switchers, etc., to all signal destinations.

- b.Video – from all source inputs (for cameras, video tape units, etc.) through all processors, switchers, etc., to all signal destinations.

D. OPTICAL

1. All optical projection systems shall meet the following performance standards:
 - a.The total varied light output form a projector, in lumens, shall be within plus-or-minus 15% of that specified by the projector manufacturer.
 - b.The light meter used for the above measurements shall be a properly calibrated foot-candle (or Lux) meter and shall be cosine-corrected.
 - c. Projectors, lenses and mirrors shall be solidly mounted and braced so that there shall be no observable movement in the image induced by motor vibration or other mechanical operations.
 - d.During performance testing, all equipment shall be operated under standard conditions as recommended by the manufacturer.

TESTS AND ADJUSTMENTS

- A. Before Acceptance Tests are scheduled, the Audio-Visual Contractor shall perform his own system checkout. He shall furnish all required test equipment and shall perform all work necessary to determine and/or modify performance of the system to meet the requirements of this specification. This work shall include the following:
 1. Maintain documentation of all performance tests for reference by the Consultant during the System Acceptance Tests.
 2. Test all audio and video systems for compliance with the Performance Standards.
 3. Adjust, balance and align all equipment for optimum quality and to meet the manufacturer's published specifications. Establish and mark normal settings for all level controls and record these settings in the "System Operation and Maintenance Manual."

CLEANUP AND REPAIR

- A. Upon completion of the Work the Audio-Visual Contractor shall remove all its refuse and rubbish from and about the premises and shall leave the relevant areas and equipment clean and in an operational state. The Audio-Visual Contractor shall be responsible for repairing any damage caused to the premises by the Audio-Visual Contractor's installation activities, at no cost to the Owner.

SYSTEM ACCEPTANCE TESTS

- B. System Acceptance Tests shall not be performed until the Audio-Visual Contractor's System Checkout has been completed. The System Acceptance Tests shall be supervised by the Consultant and shall consist of the following:
 1. A physical inventory shall be taken of all equipment on-site and shall be compared to equipment lists in the specification section documents.
 2. The Audio-Visual Contractor shall demonstrate the operation of all system equipment.
 3. Both Subjective and Objective tests shall be required by the Consultant to determine compliance with the specifications. The Audio-Visual Contractor shall be responsible for providing test equipment for these tests.

4. All final, “as-built: drawings, run sheets, manual and other required documents, otherwise known as “Close Out Documents” as detailed herein, shall be on hand. Two (2) complete sets of these documents shall be delivered to the Owner at this time. One complete set shall have been delivered to the Consultant prior to the scheduling of Acceptance Tests.
5. In the event further adjustment is required, or defective equipment must be repaired or replaced, tests may be suspended or continued at the option of the Consultant and/or Owner.

OPERATION INSTRUCTION

- A. The Audio-Visual Contractor shall provide on-the-job training by a qualified instructor to personnel designated by the Owner, to instruct them in the operation and maintenance of the systems. At no additional cost to the owner, the Audio-Visual Contractor shall provide a manufacturer’s representative for such instruction in the event the Audio-Visual Contractor does not have qualified instructors on staff for certain sophisticated equipment. All training shall take place after the systems are operational, but before the acceptance tests. There shall be a total of up to 40 hours of training on the systems included in this specification, at the discretion of the owner.
- B. The Audio-Visual Contractor shall orally instruct and demonstrate, to personnel selected by the Owner, the Owner’s Operating Manual and all final drawings as provided for in this Project Manual.
- C. This training session shall be performed independent of any acceptance testing procedures and factory training at any manufacturer’s facility. This training session shall be performed independent of any other clause in the Section.
- D. A schedule shall be submitted clearly defining the training period two weeks prior to commencement of such training.

PART 4 – ITEMIZED PARTS LIST

- A. The itemized parts list attached to this specification represents, to the best of our knowledge, all major components required for the construction of a complete and working systems as described herein. It shall be the responsibility of the Audio-Visual Contractor to verify that no item has been omitted that may be required for complete and working systems. Any additional items may be listed on a separate sheet along with associated line item costs and submitted with the bid response. **Equivalent Alternatives accepted with approval of City of Edina and TouchPoint Logic.**
- B. SEE ATTACHED SHEETS FOR EQUIPMENT LIST.

Suggested Equipment List

Equivalent Alternatives accepted with approval of City of Edina and TouchPoint Logic.

<u>Brand</u>	<u>Model#</u>	<u>Description</u>	<u>Qty.</u>
Crestron	Pro3	3-Series Control System	1
Crestron	TPMC-V15-B	V-Panel Integrated 15" HD Touch Screen, Black	1
Crestron	TSW-552-B-S	5" Touch Screen, Black Smooth	2
Crestron	TSW-550-TTK-B-S	TableTop Kit for TSW-550, Black Smooth	2
Crestron	TSW-1052-B-S	10.1" Touch Screen, Black Smooth	1
Crestron	TSW-1050-TTK-B-S	TableTop Kit for TSW-1050, Black Smooth	1
Crestron	FT-TS-600-B	Flip-Top Touch Screen-Black	1
Crestron	FTA-PWR-102	Flip-Top AC Power Outlet Module, Dual, US NEMA 5, Type B	1
Crestron	GLS-ODT-C-CN	Dual Technology Occupancy Sensor with Cresnet, 2000 Sq Ft	1
Sony	BRCZ330	HD 1/3 1CMOS P/T/Z Color Video Camera	5
Sony	BRBKIP10	HDSDI Output Board for BRC-Z330	5
Sony	BRCWMZ330	Wall Mount Bracket	5
Sony	RM-IP10	Camera Controller	1
Control Room Desk	Winsted 43042	45" Steel Top and Modesty Panel	1
Control Room Desk	Winsted 43044	57" Steel Top and Modesty Panel	1
Control Room Desk	Winsted 43061	E-Soc End Frames	1
Control Room Desk	Winsted 43062	E-Soc Intermediate Frame	1
Control Room Desk	Winsted 43542	48" Endurance Plus Work Surface	1
Control Room Desk	Winsted 43544	60" Endurance Plus Work Surface	1

Control Room Desk	Winsted E5082	Double LCD Pole Mount	2
Control Room Desk	Winsted W6493	2 Articulating Arm Mounts-28.5"Post	1
Equipment Rack	Middle Atlantic PTRK-14	14 Space Rolling Rack	1
Equipment Rack		Enclosed Rack, 44U, 28" Deep	1
Equipment Rack	Middle Atlantic CFR-10-16	10 Space Equipment Rack	1
Chief	K0P100B	Kontour K0 Pole Mount with Extreme Tilt Pitch/Pivot	13
Chief	K1D120B	Height-Adjustable Dual Arm Desk Mount	1
Crestron	DM-MD16x16	16x16 Digital Media Switcher	1
Crestron	DMC-C	HDBaseT Certified Digital Media 8G+™ Input Card	5
Crestron	DMC-SDI	SDI Input Card	2
Crestron	DMC-4K-HD	HDMI Input Card	1
Crestron	DMC-4K-CO-HD	2-Channel HDBaseT Certified 4K Digital Media 8G+ Output Card	7
Crestron	DMC-STRO	Streaming Output Card	1
Crestron	DM-TX-201-C	Digital Media 8G+ Transmitter 201	5
Crestron	DM-RMC-SCALER-C	Digital Media 8G+ Receiver & Room Controller w/Scaler	7
Blackmagic design	Mini Converter HDMI to SDI		2
Kramer	VM-16	1:16 HDMI Distribution Amplifier	1
APC	UPS Network Management Card 2	UPS Network Management Card	4
	42" HD Monitor for connection to Production Switcher		1
Audio Technica	AEW 5413a	Dual Channel Wireless System	1
Audio Technica	U851A	Cardioid Condenser Boundary Microphone	2

	22"-25" TV monitor(controllable via RS-232)	Live TV monitor Connected to Comcast box	1
	22" Computer monitor(1920x1080 resolution)		16

** All network switches/ports to be supplied/managed by Edina IT department

Option 1: Add 1 DMC-C and 1 DM-TX-201-C at the podium for a Blu-Ray player. Add Blu-Ray Player controls to all touch panels.

Option 2: Add program "Request to Speak mode". This is a "Programming" adjustment to the system, normally off at startup then enabled by the Chair or Staff members. When enabled the Chair is notified of a "Request to Speak" on their touch panel when a "Request" Council member taps their mic button. Their mic Led will flash till the Chair recognizes them with a button on the panel.